ABSTRACT

TITLE OF THE ABSTRACT : Change in scar grading following healing of a corneal ulcer over 1 year and its effect on visual function -an observational study.

DEPARTMENT : Department of Ophthalmology

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DEGREE AND SUBJECT : MS Ophthalmology

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OBJECTIVES:

PRIMARY OBJECTIVE

To study the change in scar grade over 1 year following healing of a suppurative corneal ulcer.

SECONDARY OBJECTIVES

1. To study the visual function (visual acuity, stereopsis and binocular visual field, glare acuity) in patients who have been treated in our department for infective keratitis 1 year (prospective arm) to 2 years (Retrospective arm) after complete healing of a corneal ulcer.

2. To study the subjective need for corneal transplantation following an episode of infective keratitis.

METHODS:

This was an observational study with two study cohorts (a prospective cohort, and a retrospective cohort) in a tertiary care hospital in South India. 71 eyes of 71 eligible patients were recruited and data collected using pre-designed proforma. The corneal scars were graded by clinical examination. Visual function was assessed with Best Corrected Visual Acuity, Binocular Visual Field, Stereopsis and Glare Acuity. These were measured at the time of recruitment when the ulcer epithelial defect had just healed, and at 3 months, 6 months and 1 year in the prospective arm and at the 1 year and 2 year visit in the retrospective arm. A questionnaire was given to the patients at their final visit for a subjective assessment of quality of vision and need for corneal transplantation in both the prospective and retrospective arms.

RESULTS:

There was a clinically significant reduction in the corneal scar grade at one year following healing of the ulcer

Best Corrected Visual Acuity improved significantly at one year following healing of the ulcer. Binocular visual field showed slight improvement whereas glare acuity and stereopsis did not show any statistically significant change.

The majority of the patients did not feel they needed a corneal transplant following the corneal ulcer, the main reason being absence of a subjective perception of a visual defect significant enough to warrant undergoing corneal transplantation.

CONCLUSIONS-

The results of the present study proves that a combination of all the visual outcome variables used, and not just visual acuity would be a better determinant of the outcome following corneal ulcer. Hence, corneal transplantation could be delayed in patients with good contralateral vision so that the corneal grafts, which are in short supply, are allocated to more deserving patient.